

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-003811**Date Inspected:** 01-Sep-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

CWI Name:	Liu Hua Jie and Huang Wen Pang			CWI Present:	Yes	No	
Inspected CWI report:	Yes	No	N/A	Rod Oven in Use:	Yes	No	N/A
Electrode to specification:	Yes	No	N/A	Weld Procedures Followed:	Yes	No	N/A
Qualified Welders:	Yes	No	N/A	Verified Joint Fit-up:	Yes	No	N/A
Approved Drawings:	Yes	No	N/A	Approved WPS:	Yes	No	N/A
				Delayed / Cancelled:	Yes	No	N/A
Bridge No:	34-0006			Component:	OBG and SAS Tower Fabrication		

Summary of Items Observed:

On this date, Caltrans Office of Structural Material (OSM) Quality Assurance (QA) Inspector Joselito Lizardo was present as requested to perform observations on the fabrication of Orthotropic Box Girder (OBG) and SAS Tower at Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China.

The QA Inspector has randomly observed the following activities on sub-assembly Bays mentioned below;

Bay 4: Tower Diaphragm

The QA Inspector randomly observed ZPMC Welders ID #068253, ID #066402, ID #067993 and ID #037992 utilizing the Shielded Metal Arc Welding (SMAW) Process in the 3G (Vertical Groove) Position with ZPMC WPS WPS-B-T-3313-Tc-P5 to weld tower double diaphragm PJP fill pass on 40mm thick web plate to 60mm thick stiffener plate tee joint WSD1-SA317 weld joints 14, 15, 16 and 17. The QA Inspector randomly observed ZPMC CWI Zhashi monitoring weld parameters.

Heat straightening was also observed on 7-open rib stiffener to side panel SP400(A)-001 weld joints 008~016, and 3-open rib stiffener to deck panel DP513(A)-001 weld joints 001~006 due to welding distortion.

Oxy-acetylene gas was used with thermal heat input of less than 650 degree C following procedure HSR1(B) – 2138 and HSR1(B)-2161 respectively.

Bay 7: OBG - Floor Beam Sub Assembly

The QA Inspector randomly observed ZPMC welder Duan Xin Zhi ID Number 050502, utilizing the SAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-2221-B-L2c-S-2, to weld the CJP fill pass on plate

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

splice butt joint of floor beam sub-assembly FB009-017-026. QA Inspector randomly observed ZPMC CWI Huang Wen Pang monitoring weld parameters.

FCAW(2G) CJP welding repair on CJP of flange to web plate tee joint FB009-005-043 due to UT reject per welding repair report B-WR824 and following procedure WPS-345-FCAW-2G(2F)-REPAIR. ZPMC welder Hong Shuili ID #044815 was seen performing the repair. QA Inspector randomly observed ZPMC CWI Huang Wen Pang monitoring weld parameters.

FCAW(2F) fillet welding was observed on stiffener to web plate of floor beam FB083-002-012 using 1.4mm diameter electrode, filler metal brand E71T-1, class Supercored 71H. ZPMC welder Zhang Qingquan ID #044774 was seen performing the task. QA Inspector randomly observed ZPMC CWI Huang Wen Pang monitoring weld parameters.

Heat straightening was also observed on floor beam FB031-001 weld joints 079, 122, 125, 126 and 127 due to welding distortion. Oxy-acetylene gas was used with thermal heat input of less than 650 degree C with the aid of three jacks following procedure HSR(B) – 208.

Bay 8: Tower Diaphragm

The QA Inspector randomly observed ZPMC welder Xiao Hexia ID Number 045273, utilizing the SAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-3221-B-U3c-S-1, to weld the CJP fill pass on 75mm thick plate splice butt joint of tower diaphragm plate WSD1-SA290 weld joint 13B. This splice happened due to cutting error. QA Inspector randomly observed ZPMC CWI Lvliqing monitoring weld parameters.

This QA observed four ZPMC welders ID #045133, ID #066028, ID #067993 and ID #051324 SMAW(2G) PJP welding fill pass on 40mm web plate to tower double diaphragm(bottom) SSD1-SA311B/B weld joints 5 and 6. ZPMC welders were noted utilizing Excalibur E9018M H4R, 4.8mm diameter electrode. The QA Inspector randomly observed ZPMC CWI Liu Hua Jie monitoring weld parameters.

This QA observed two ZPMC welders, ID #037944 and ID #066734 utilizing the FCAW Process in the 2F (Horizontal) Position with a 1.4mm diameter electrode, filler metal brand K-71TSR, semi automatic with ZPMC WPS WPS-B-T-4132 to weld fillet fill pass on fillet weld connection between tower diaphragm plate to diaphragm flange WSD1-SA370-1. The QA Inspector randomly observed ZPMC CWI Liu Hua Jie monitoring weld parameters. Tack/fit-up of fillet weld connection on tower diaphragm plate to diaphragm flange NSD1-SA265-1 and WSD1-SA226-2 using THJ506Fe, 4.0mm diameter was also observed.

Summary of Conversations:

No significant conversation occurred today.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Joshua Ishibashi, (858) 232-7081, who represents the Office of Structural Materials for your project.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

Inspected By: Lizardo, Joselito

Quality Assurance Inspector

Reviewed By: Cuellar, Robert

QA Reviewer